

Application Serial No: 09/987,766
Attorney Docket No.: 51950 (ACT-163)

REMARKS

Entry of the foregoing, reexamination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.112, and light of the remarks which follow are respectfully requested.

Claims 1-43 are pending in the application, claims 40-43 having been newly presented. Support for claim 40 can be found at least at page 9, paragraph 38 of the specification. Support for claim 41 can be found at least at page 7, paragraph 34. Support for claim 42 can be found at least in Figure 2. Support for claim 43 can be found at least in original claim 1 and Figure 2. By the remaining amendments, the term "including" has been replaced with "comprising" in various claims.

Turning now to the Official Action, applicants note with appreciation the indication of allowable subject matter with respect to claim 27.

The Examiner has requested a new Declaration setting forth the citizenship of each inventor. A new Declaration will be submitted to the Examiner upon execution thereof by the inventors.

Claim 1-13, 18-26 and 28-39 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Kato* (U.S. Patent No. 5,853,626). This rejection is respectfully traversed for at least the following reasons.

The present invention relates to optical assemblies and to methods for assembling optical assemblies. Independent claim 1, for example, sets forth an optical assembly, comprising a substrate comprising an upper surface and a cut-out portion, an optical array mounted on the upper surface, and an imaging assembly positioned at least partially within the cut-out portion. The imaging assembly comprises at least one imaging device mounted on a first chip. The optical array is optically coupled to the imaging assembly. Other aspects of the invention are set forth in independent claims 21, 24, 30, 33, 35, 43 and the claims dependent therefrom.

The present claims cannot properly be rejected based on *Kato*.

Kato relates to an optical transmission module for use in optical telecommunications, optical information processing, optical interconnections, and the like. (Col. 1, lines 11-14 of *Kato*).

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The Examiner relies on Figure 1 of *Kato*, which is labeled as "PRIOR ART" and is disclosed by *Kato* as including a carrier 11, a lens array 12, a flat optical fiber cable 13, a photodiode array 14, an adjustment block 14, and an alignment member 16. The photodiode array 14 is carried by the carrier 11; and the carrier 11 is held on an adjustment block 15. The alignment member 16 is formed of a silicon block having V-grooves for holding optical fibers that are arranged to form the flat optical fiber cable 13. Further, the lens array 12 carries thereon a plurality of monolithic microlenses for focusing the optical beams in the optical fibers forming the cable 13, upon corresponding photodiodes that form the photodiode array 14. (Col. 1, lines 21-35 and Fig. 1 of *Kato*).

It is well established, that in order to establish anticipation under §102(b), each element of the claim in issue must be found, either expressly described or under principles of inherency, in a single prior art reference. Kalman v. Kimberly-Clark Corp., 218 USPQ 789 (Fed. Cir. 1983). This is not the case here.

Kato does not disclose or suggest each and every feature of the present invention. For example, with respect to independent claim 1, *Kato* does not disclose or fairly suggest at least one imaging device mounted on a first chip. *Kato* discloses a plurality of monolithic microlenses. That is, the microlenses are formed from a single piece of material. The monolithic microlenses are not mounted on a first chip, but are connected as a single piece to the substrate.

Nor does *Kato* disclose or suggest an integrated optic chip, as set forth in independent claims 21, 24, 30 and 33. In this regard, the Official Action states that "*Kato* disclose ...an integrated optic chip (14) affixed to the side of the substrate" (Official Action at page 3). Reference numeral 14 of *Kato*'s Figure 1 is not an integrated optic chip, but is a photodiode array. Moreover, the *Kato* photodiode array is not affixed to a surface of the substrate, as set forth in claims 21 ("side surface") and 24, 30 and 33 ("upper surface"). *Kato* discloses that the photodiode is carried by the carrier 11. More specifically, Figure 1 of *Kato* shows the photodiode as being attached to the side of the carrier 11. To the extent the Office contends that the carrier is a "waveguide" (see Official Action at page 3), applicants respectfully note that the structures shown in the top surface of the carrier are believed to be metallization features, not waveguides.

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Regarding claim 24, the Examiner notes that "adhesive is used to affix the optical array to the upper surface, citing column 4, lines 1-4 of *Kato*. This disclosure of *Kato* is in reference to embodiments in accordance with the *Kato* invention; not with reference to the "Prior Art" of Figure 1. It is improper to combine unrelated portions of a reference in making a rejection under §102.

Further, *Kato* does not disclose or suggest each feature of independent claim 35. Claim 35 sets forth a method for assembling an optical assembly. *Kato* provides no description whatsoever relating to Figure 1 as to the method for forming the assembly. The Examiner, however, takes the position that "the steps in the method claims would have been inherently disclosed by the structure of the prior art device" (Official Action at page 4). Applicants respectfully disagree.

To support an anticipation rejection based on inherency, the Examiner must provide factual and technical grounds establishing that the inherent feature necessarily flows from the teachings of the prior art. See *Ex parte Levy*, 17 USPQ 2d 1461, 1464 (BPAI 1990). The inherency must flow as a necessary result from the prior art, not merely as a possible result. See *In re Oelrich*, 212 USPQ 323, 326 (C.C.P.A. 1981). Given the absence in *Kato* of any description of the assembly process and the lack of supporting grounds in the Official Action, the Examiner has not met his burden in establishing that the claimed method is a necessary result of the structure disclosed in *Kato*.

Accordingly, withdrawal of the §102(b) rejection based on *Kato* is respectfully requested.

Claims 1-3, 6-19, 35-37 and 39 stand rejected under 35 U.S.C. §102(e) as being anticipated by *Steinberg* (U.S. Patent Application Publication No. 2002/0181854). This rejection is respectfully traversed for the following reasons.

Steinberg discloses optical fiber switches with transversely movable fiber arrays (page 2, par. 56 of *Steinberg*).

The Official Action improperly relies on combinations of unrelated portions and embodiments of *Steinberg* to purportedly arrive at the present invention. There is no single embodiment in *Steinberg* which includes each and every feature of claims 1 and 35. For example, the Official Action relies on reference numerals 90 and 92 of Figure 19

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for the claimed imaging assembly and on Figure 26 for the cut out section. This mixing and matching of disclosures in a single document is not proper under §102.

Accordingly, withdrawal of the §102(e) rejection based on *Steinberg* is respectfully requested.

Claims 1-6, 13, 17-25 and 28-39 stand rejected under 35 U.S.C. §102(e) as being anticipated by *Yap* (U.S. Patent No. 6,483,969). This rejection is respectfully traversed for the following reasons.

Yap relates to electronic assemblies and, particularly, to a micro-fixtured lensed assembly for optoelectronic devices and optical fibers (col. 1, lines 15-17 of *Yap*).

Yap does not disclose or suggest each feature of the present invention. For example, *Yap* does not disclose or fairly suggest an optical array as set forth in the independent claims. The Official Action relies on reference numeral 406 of Figure 4 as an optical array. That feature, however, is described by *Yap* as "optical fibers 406" (col. 5, line 11 of *Yap*). *Yap* further discloses that "[b]ase 400 has a precision v-groove 402 and precision saw cut 404 that assist in the mechanical alignment of optical fibers 406..." (col. 5, lines 9-11 of *Yap*). Persons skill in the art would readily understand that optical fibers do not, in and of themselves, form an optical array. In an optical fiber array, for example, a plurality of optical fibers are attached to or embedded in a substrate. The present invention includes an optical array on the surface of a substrate. Figure 4 of *Yap* illustrates optical fibers, not an optical array, on a substrate surface.

Accordingly, withdrawal of the §102(e) rejection based on *Yap* is respectfully requested.

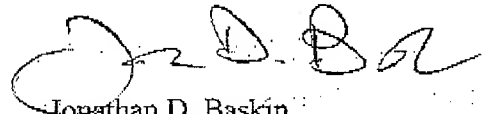
As a final matter, it is noted that the dependent claims are allowable over the applied documents at least for the reasons set forth above with respect to the independent claims. Similarly, newly presented claims 40-43 are believed to be allowable over the applied documents.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.

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If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at his earliest convenience.

Respectfully submitted,



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